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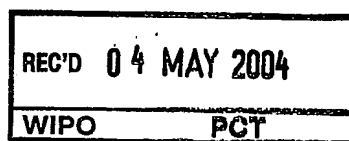
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Date of Filing : 30 JAN 2003

Application Number : 200300221-9

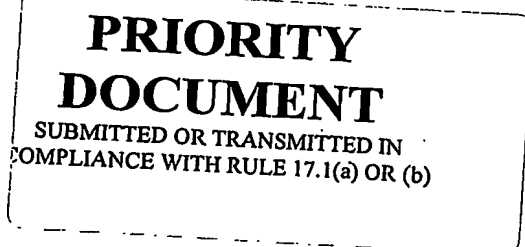
Applicant(s) /
Proprietor(s) of Patent : CHOW, CHIEW YING

Title of Invention : METHOD FOR GENERATING AND
INPUTTING MNEMONIC DEVICES AND
ARTICLE FOR REGISTERING THE INPUT
ARRANGEMENT

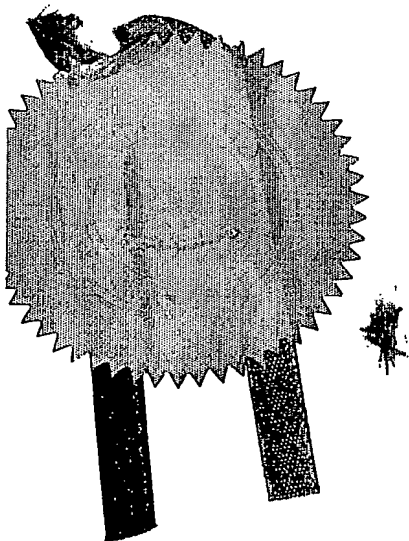



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27 APR 2004



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ACTION

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Patents Act
(Cap 221)
Patents Rules
Rule 19

INTELLECTUAL PROPERTY OFFICE OF SINGAPORE



101101

REQUEST FOR THE GRANT OF A PATENT UNDER
SECTION 25

30 Jan '03

* denotes mandatory fields

1. YOUR REFERENCE*

MWC03/1

2. TITLE OF
INVENTION*

SYSTEM AND METHOD OF LEARNING BY ACRONYMS

3. DETAILS OF APPLICANT(S)* (see note 3)

Number of applicant(s)

1

(A) Name

CHOW CHIEW YING

Address

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State

SG

Country

SG

☐

For corporate applicant

☒

For individual applicant

State of incorporation

State of residency

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Country of incorporation

SG

Country of residency

SG

☐

For others (please specify in the box provided below)

(B) Name

NIL

Address

State

Country



30th Jan '03.

R64801
\$1600
3071

☐ For corporate applicant

State of incorporation

☐ For individual applicant

State of residency

Country of incorporation

Country of residency

☐ For others (please specify in the box provided below)

NIL

(C) Name

NIL

Address

State

Country

☐ For corporate applicant

State of incorporation

☐ For individual applicant

State of residency

Country of incorporation

Country of residency

☐ For others (please specify in the box provided below)

NIL

☐

Further applicants are to be indicated on continuation sheet 1

4. DECLARATION OF PRIORITY (see note 5)

A Country/country designated

DD MM YYYY

File number

Filing Date

B Country/country designated

DD MM YYYY

File number

Filing Date

☐

Further details are to be indicated on continuation sheet 6

5. INVENTOR(S)* (see note 6)

A. The applicant(s) is/are the sole/joint inventor(s)

Yes

☒

No

☐

B. A statement on Patents Form 8 is/will be furnished

Yes

☐

No

☒

6. CLAIMING AN EARLIER FILING DATE UNDER (see note 7)

☐

section 20(3)

☐

section 26(6)

☐

section 47(4)

Patent application number

DD MM YYYY

Filing Date

Please mark with a cross in the relevant checkbox provided below
(Note. Only one checkbox may be crossed.)

☐

Proceedings under rule 27(1)(a)

DD MM YYYY

Date on which the earlier application was amended

☐

Proceedings under rule 27(1)(b)

7. SECTION 14(4)(C) REQUIREMENTS (see note 8)

Invention has been displayed at an international exhibition

Yes

☐

No

☒

8. SECTION 114 REQUIREMENTS (see note 9)

The invention relates to and/or used a micro-organism deposited for the purposes of disclosure in accordance with section 114 with a depository authority under the Budapest Treaty.

Yes

☐

No

☒

9. CHECKLIST*

(A) The application consists of the following number of sheets

I	Request	<input type="text" value="4"/>	Sheets
II.	Description	<input type="text" value="8"/>	Sheets
III	Claim(s)	<input type="text" value="4"/>	Sheets
IV	Drawing(s)	<input type="text" value="8"/>	Sheets
V.	Abstract (Note: The figure of the drawing, if any, should accompany the abstract)	<input type="text" value="1"/>	Sheets
	Total number of sheets	<input type="text" value="25"/>	Sheets

(B) The application as filed is accompanied by

☐

Priority document(s)

☐

Translation of priority document(s)

☐

Statement of inventorship
& right to grant

☐

International exhibition certificate

10. DETAILS OF AGENT (see notes 10, 11 and 12)

Name

Firm

11. ADDRESS FOR SERVICE IN SINGAPORE* (see note 10)

Block/Hee No

8

Level No

05

Unit No /PO Box

21

Street Name

BOON LAY DRIVE

Building Name

SUMMERDALE CONDOMINIUMS

Postal Code

S649928

12. NAME, SIGNATURE AND DECLARATION (WHERE APPROPRIATE) OF APPLICANT OR AGENT* (see note 12)

(Note: Please cross the box below where appropriate.)

☒

I, the undersigned, do hereby declare that I have been duly authorised to act as representative, for the purposes of this application, on behalf of the applicant(s) named in paragraph 3 herein

CHOW CHIEW YING

Name and Signature

ChowChiewYing

DD MM YYYY

27/01/2003

System and method for learning by acronyms

Background to the invention

This invention relates to systems and methods that can be used to assist the learning of
5 individual words or lists of words in a range of circumstances.

Weak learners often have difficulty remembering words or lists of terms in the context of broader exercises that they may be undertaking. They are often characterised as "at-risk" when it comes to learning difficult information.

There are two characteristics that weak learners display: inability to form acronyms;
10 and a greater dependence or preference to use visuo-spatial activities to learn. These have been discussed in *Teaching Students to Read through Their Individual Learning Styles*, Prentice-Hall. New York. Carbo, Dunn & Dunn, 1986.

It is also becoming apparent that many people, including weak learners, have little or no difficulty with the layout of the keypad of a mobile phone or similar device. The
15 growing use of text messaging over telephone systems has created a widespread familiarity with the keypad that has not so far been used in any other way.

Summary of the invention

It is an object of the invention to provide learners with memory tools to remember
20 information better through the use of acronyms and visuo-spatial materials.

In one aspect the invention may broadly be said to consist in a system for assistance in learning, comprising: an acronym generator that receives multiple words from a user and generates acronyms from the words for selection by the user, and an acronym recorder having at least one graphical representation on which the user records and
25 views an acronym in a spatially significant pattern.

Preferably the acronym generator is a software program that determines the first letter of each of the words and presents the user with a range of possible acronyms with the first letters ordered differently, from which a preferred acronym may be selected.

Preferably the acronym recorder is a pad having a plurality of sheets, each sheet
30 having a representation of the keypad of a mobile telephone or like device, on which



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the user indicates letters of an acronym for learning in a pattern determined by the keypad.

5 In another aspect the invention may be said to consist in a method of learning comprising: operating an acronym generator to create a list of possible acronyms from a list of words, selecting a preferred acronym from the list of acronyms, recording the acronym letter by letter in a visual pattern determined by a template of the alphabet, and repeating the letters of the acronym from the pattern in order to commit the acronym to memory.

10 Preferably the acronym generator is a software program having a graphical user interface, and the template is a sheet having a representation of the keypad of a telephone. Preferably the user records an acronym on the template by highlighting letters on the template according to their frequency of occurrence in the acronym, and indicating their order in the acronym.

15 In one preferred embodiment of the system or method, acronyms are recorded using a pad containing paper sheets, on which letters of a keypad may be highlighted by marking with different colours and linking with arrows. The sheets may then be associated with material from which the acronym originated, such as by fastening in the pages of a book, for example. Alternatively the sheets may be sufficiently large to be placed on the floor or hung from a wall to assist repetition of the acronym during a learning process.

In a third aspect the invention may be said to consist in a record pad for acronyms, comprising a plurality of sheets, each sheet presenting the letters of the alphabet arranged in a pattern, on which an acronym may be indicated letter by letter to assist learning processes.

25 Preferably the letters of the alphabet are arranged according to the pattern of a telephone keypad, particularly a mobile telephone. Preferably the record pad is used in conjunction with an acronym generator implemented in computer software. In one embodiment the acronym generator and record pad are provided together as a learning kit.

30 The invention may also be said to consist in any alternative combination of features described in this specification. All equivalents of these features are deemed to be included whether or not expressly set out.

List of Figures

Preferred embodiments of the invention will be described with respect to the accompanying drawings, of which:

5 Figure 1 shows a computer input interface that might be presented to a user of an acronym generator,

 Figure 2 shows a computer output interface that might be presented to a user of the acronym generator,

 Figure 3 is a flowchart that outlines operation of the input interface,

10 Figure 4 is a flowchart that outlines operation of the acronym generator in relation to one-word acronyms,

 Figure 5 is a flowchart that outlines operation of the acronym generator in relation to two-word acronyms,

 Figure 6 is a flowchart that outlines operation of the acronym generator in
15 relation to acrostics,

 Figure 7 is an example of an output that the generator might display to assist completion of an acronym recorder,

 Figure 8 is a prototype acronym recorder,

 Figure 9 is a flowchart that outlines operation of the acronym generator in
20 relation to the display of Figure 7, and

 Figure 10 indicates a number of acrostics by way of example.

Detailed description of the preferred embodiments

Referring to the drawings it will be appreciated that the invention may be
25 implemented in a range of different forms for a variety of different learning purposes. An acronym generator according to the invention is generally to be available as software for a computer, perhaps provided on a disc or other storage medium or available by download or remote access over a network such as the Internet. An acronym recorder according to the invention is also generally to be available in

different forms, typically as a pad of paper sheets having an adhesive portion for attachment to material associated with a learning exercise or other activity. Also as a printout capability associated with the generator software. Both the generator and the recorder may be combined in a learning kit.

5 Figure 1 is a computer interface that may be presented to a user when operating the acronym generator, to be considered in conjunction with the flowchart of Figure 3. In context, the user is typically reading a piece of textual information that is to be remembered. He or she picks out a list of keywords, such as different leadership styles – supportive, authoritarian, democratic, task-oriented, employee-focused. The
10 user opens up the generator by clicking on a software link, and is presented with a graphical interface with a row of empty boxes for filling in of the keywords, generally as shown in Figure 1. User keys in the keywords, one in each box, and selects an option, such as the three shown here: 1-word acronym, 2-word acronym or acrostic.

Figure 2 is an interface that may be presented to a user when a 1-word acronym has
15 been requested, to be considered in conjunction with the flowchart of Figure 4. The program extracts the first letter from all the keywords. eg. S A D T E and combines the letters in different permutations to form a string of 1-word acronyms. eg. SADTE, DSATE. Each generated string of letters is compared to a dictionary of real words. This dictionary can be designed to be a rigid system, a modular system or a
20 customizable database. The algorithm uses the first letter of each acronym to compare with the dictionary. If the generated string of letters matches a word found in the dictionary, the word (or acronym) is placed on the list of possible acronyms. If a match is not found in the dictionary, the string of letters is compared further with the words in the dictionary to see if there are other words that resemble the string of
25 letters. If there are, the word in the dictionary is placed on the list of possible acronyms. The process of comparing each string of letters to the dictionary is repeated till all the strings of letters have been checked against the words in the dictionary. The list of possible acronyms is presented eg. STEAD, TEASeD and the user selects the acronym that is most meaningful to him or her and clicks on it. A
30 graphical interface then appears showing the selected acronym and the keywords it is to represent. e.g. STEAD – Supportive, Task-oriented, Employee-focused, Authoritarian, Democratic. The user may select "print", or "save" to store the acronym in the hard drive.

The list of possible acronyms may include words that are not a perfect match to the letters that have been selected from the user input. Words containing one or more additional letters may be suitable in the results. All of the possible words are generally analysed by letter frequency and the number of permissible additional letters are specified. As an example, eg. "Apple" is made up of 1 a, 2 p, 1 l and 1 e. A database entry for this word will look something like this:

Name	Length	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Apple	5	1				1						1					2										

For a collection of letters "APLE" derived from the user input, the list of possible acronyms will include APPLE where one additional letter is permitted, and APPLES or PLEASE when two additional letters are permitted. Variations on this algorithm are possible depending on constraints that may be placed on the acronym generator.

Figure 5 is a flowchart outlining the generator process when a 2-word acronym is required. As before, the program extracts the first letter from all the keywords. eg. S A D T E, but then breaks up the letters into two groups. There could be many clusters of two groups. eg. T A E / D S and T S / D E A. The program takes each group of letters (e.g. T A E) and combines the letters in different permutations to form a string of 1-word acronyms (e.g. TAE and SD). Each generated string of letters is compared to a dictionary of words, using the first letter of each acronym to compare with the dictionary. If the generated string of letters matches a word found in the dictionary, the word (or acronym) is placed on the list of possible acronyms. If a match is not found in the dictionary, the string of letters is compared further with the words in the dictionary to see if there are other words that resemble the string of letters. If there are, the word in the dictionary is placed on the list of possible acronyms. The process of comparing each string of letters to the dictionary is repeated till all the strings of letters have been checked against the words in the dictionary. A list of possible 2-word acronyms is presented to the user. eg. TEA and SaD for TAE and SD respectively, and the user selects the acronym that is most meaningful to him or her and clicks on it. A graphical interface then appears showing the selected 2-word acronym and the keywords it is to represent. eg. TEA -Task-oriented, Employee-focused, Authoritarian, SaD- Supportive and Democratic. The user may select "print", or "save" to store the acronym in the hard drive.

In one embodiment of the invention, where multiple acronyms are recorded, the acronym generator weights the acronyms by reference to how they can be best identified and remembered. The option is then open for the acronyms to be displayed in a preferential manner. Such weighting may be defined by the user or by virtue of specific spatial patterns such as squares, triangles, straight lines, etc. The acronym generator may be configured to identify and generate the spatial pattern of all the formed acronyms in accordance to the pattern utilised in the acronym recorder. Thereafter, the acronym generator will identify the spatial patterns generated by each said acronym; and will select and recommend on a preferential basis a customizable or limited number of acronyms in accordance to their adherence to the weighting basis provided by the user or the stated specific spatial patterns. As an example, if the acronym recorder is arranged in accordance to the keypad of a mobile phone, the acronym generator having a choice of either DOW or DOT as an acronym will prefer and recommend DOW, which forms an easy to remember specific spatial pathway i.e. a straight line down in three steps as identified on the acronym recorder rather than DOT which is two steps down and one step left and down .

Figure 6 is a flowchart outlining the generator process when an acrostic is required and Figure 10 gives a number of acrostics by way of example. The program extracts the first letter from all the keywords. eg. S A D T E and combines the letters in different permutations to form different strings of letters e.g. S A D T E / D S A T E. Each generated string of letters is compared to a store of jiggles and acrostics in the software. The store of jiggles and acrostics includes strings of letters for each jiggle that represent the first letter of each word in the jiggle (eg. Old McDonald Had A Farm would be represented by O M H A F). If the generated list of letters matches one found in the acrostic or jiggle bank, the found acrostic is placed on the list of possible acrostics. If the list of letters does not match the letter strings in the acrostic bank, the generated string of letters is compared further with the acrostic bank to see if there are any similar letter strings. If there are, the matched acrostic in the acrostic bank is placed on the list of possible acrostics. The process of comparing each generated list of letter string to the acrostic bank is repeated till all the generated letter strings have been checked against the acrostic bank. The list of possible acrostics is presented to the user. eg. 'The Dog Ate Sally's English books' to represent T D A S

E. The user selects the acrostic that is most meaningful to him or her and clicks on it, and is presented with a graphical interface showing the selected acrostic and the keywords it is to represent. The user may select "print", or "save" to store the acronym in the hard drive.

5 Figures 7 and 8 show how a user may record and apply the results from the acronym generator. Figure 7 shows a computer interface that may be presented to a user to assist in use of a record sheet or template such as shown in Figure 8. The record sheet is preferably part of a pad of generally known structure, each sheet having an adhesive portion that holds the sheets together ready for use and enables each to be attached to
10 another object after use. A range of pad structures with or without adhesive may be used, including large sheets to be laid out on a floor or hung on a wall for example. Each sheet has the letters of the alphabet arranged in a spatially significant way, preferably according to the keypad of a mobile telephone as shown in these examples. An advantage of the keypad arrangement is that learning can be assisted by the
15 growing familiarity that many people have with use of mobile phones for text messaging. The visuo-spatial skills that weak learners in particular may have developed from operation of mobile phones, can be used to assist their learning via acronyms.

Figure 9 is a flowchart indicating how an acronym or acrostic may be recorded using
20 a pad having the alphabet laid out in a template to assist learning. Based on the results created by the generator process as stated above, the letters of an acronym are selected. eg. S T E A D. The user counts how many times each letter is selected, and colours the letter keys on a record sheet using highlighters according to the letters in the acronym. Colour codes are preferably employed for the number of times each
25 letter is selected eg. Green – for once, Yellow / Orange – for twice and Red – for thrice or more. The user then links up the coloured letters with arrows to indicate the order of the letters, as shown in Figure 7 for example, performed by the generator program to assist the user if required. The user practises moving their fingers around to press the coloured letters in a manner similar to finger movement when keying in
30 telephone numbers, and remembers how the fingers move when pressing the letters. Once complete the sheet from the pad can be attached to the page of the text where the information is found for future reference.

Variations and benefits of the invention will be appreciated by a reader with experience in relation to weak learners and the art of learning by use of visuo-spatial skills. The embodiments described above are given by way of example only.

CLAIMS

What is claimed is:

1. A system for assistance in learning comprising:
 - 5 a. an acronym generator that receives multiple words from a user and generates a list of acronyms from the word for selection by the user; and
 - b. an acronym recorder having at least one graphical representation on which the user records and views an acronym in a spatially significant
10 pattern.
2. A method for learning comprising:
 - a. operating an acronym generator to generate a list of acronyms from a list of words;
 - 15 b. selecting a preferred acronym from the list of acronyms;
 - c. recording the selected acronym on an acronym recorder that has a graphical representation and allows the user to view the recorded acronym in a spatially significant pattern.
- 20 3. A method for learning as claimed in claim 2 wherein the recording of the selected acronym on an acronym recorder comprises:
 - a. counting the number of times the letters (alphabets) of the selected acronym appears in the selected acronym;
 - b. assigning different colours to define the number of times a letter
25 (alphabet) appears in an acronym;
 - c. colouring the letters (alphabets) on the acronym recorder that appears in the acronym with the respective colours assigned to represent the number of times it appears in the selected acronym;
 - d. connecting the coloured letters (alphabets) on the acronym recorder in
30 the sequence as they appear in the selected acronym; and
 - e. using finger to press the coloured letters by following the connection sequence.

4. A method of generating acronyms (by an acronym generator) comprising the steps of:

- a. listing multiple words;
- b. determining the first letter (alphabet) of each listed words;
- 5 c. combining the determined first letter (alphabet) of each listed words in all possible manner (combination) to form one-word acronyms;
- d. searching a dictionary of real-words for any of the formed one-word acronyms; and
- 10 e. presenting to the user all the formed one-word acronyms that can be found in the dictionary so that the user can select the preferred formed one-word acronyms.

5. A method of generating acronyms (by an acronym generator) comprising the steps of:

- 15 a. listing multiple words;
- b. determining the first letter (alphabet) of each listed words;
- c. combining the determined first letter (alphabet) of each listed words in all possible manner (combinations) to form two-words acronym;
- d. searching a dictionary of real-words for any of the formed two-words 20 acronyms; and
- e. presenting to the user all the formed two-word acronyms that can be found in the dictionary so that the user can select the preferred formed two-word acronyms.

25 6. A method of generating acronyms (by an acronym generator) comprising the steps of:

- a. listing multiple words;
- b. determining the first letter (alphabet) of each listed words;
- c. combining the determined first letter (alphabet) of each listed words in all possible manner (combination) to form acronyms;
- 30 d. searching a dictionary of jiggles and acronyms for any of the formed acronyms; and

- e. presenting to the user all the formed acronyms that can be found in the dictionary so that the user can select the preferred formed acronyms.

5 7. A method of generating acronyms (by an acronym generator) as claimed in claims 3 through 5 further comprising the steps of:

- a. repeating one of the determined first letter (alphabet) of each listed words;
- b. combining the determined letters (alphabets) of all listed words and the repeated letter (alphabet) in all possible manner (combinations) to form
10 either a one-word acronym or a two-word acronym or an acronym;
- c. searching either the dictionary of real-words or the dictionary of jiggles and acronyms for any of the formed acronyms; and
- d. presenting to the user all the formed acronyms that can be found in the dictionary so that the user can select the preferred formed acronyms.

15

8. A method of generating acronyms (by an acronym generator) as claimed in claims 3 through 5 further comprising the steps of:

- a. determining the second letter (alphabet) of each listed words;
- b. combining the determined first and second (alphabets) of all listed
20 words in all possible manner (combinations) without to form either one-word acronyms or a two-words acronyms or acronyms;
- c. searching either the dictionary of real-words or the dictionary of jiggles and acronyms for any of the formed acronyms; and
- d. presenting to the user all the formed acronyms that can be found in the
25 dictionary so that the user can select the preferred formed acronyms.

25

9. An acronym recorder that has a graphical representation for recording an acronym comprising a plurality of sheets of papers wherein each sheet of paper contains alphabets arranged in a pattern.

30

10. An acronym recorder as claimed in claim 9 wherein said alphabets is arranged according to the pattern of a telephone keypad, particularly a mobile phone.

11. A method of presenting in a preferential order acronyms generated through the methods claimed in claims 4 to 8 comprising the steps of:-

- a. identifying all formed acronyms;
- 5 b. generating the spatial pattern of each said formed acronym in accordance to the pattern utilised in the acronym recorder;
- c. identifying the spatial patterns generated by each said acronym; and
- d. weighting the acronyms in accordance to their adherence to specific spatial patterns.

10 12. A dictionary as claimed in claims 4 to 8 wherein said dictionary is a customisable database.

ABSTRACT

SYSTEM AND METHOD FOR LEARNING BY ACRONYMS

This invention relates to systems and methods that can be used to assist the learning of individual words or lists of words in a range of circumstances. This invention provides learners with memory tools to remember information better through the use of acronyms and visuo-spatial materials and may broadly be said to consist in a system for assistance in learning, comprising: an acronym generator that receives multiple words from a user and generates acronyms from the words for selection by the user, and an acronym recorder having at least one graphical representation on which the user records and views an acronym in a spatially significant pattern. The acronym generator is preferably a software program and the acronym recorder is a pad having a plurality of sheets, each sheet having a consistent graphical template. In another aspect the invention may be said to consist in a method of learning comprising: operating an acronym generator to create a list of possible acronyms from a list of words, selecting a preferred acronym from the list of acronyms, recording the acronym letter by letter in a visual pattern determined by a template of the alphabet, and repeating the letters of the acronym from the pattern in order to commit the acronym to memory. The acronym generator is preferably a software program, and the template is a sheet having a consistent graphical template.



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The Acronym Creator

Enter Keywords

Task-oriented

↓

1. Supportive
 2. Authoritarian
 3. Democratic

Help?

Enter

Select

- 1-Word Acronym ☐
- 2-Word Acronym ☐
- Acrostic ☐

GO

Figure 1

The Acronym Creator

Click on Acronym Below

TADS
 DATeS
 TeADS
 STeAD

Help?

Topic:

Leadership Style

Description of Acronym:

The acronym describes the different leadership styles. The information is found on page 11 in "Leadership for Organisations".

Print Acronvm

Save Acronvm

New Acronvm

Figure 2



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5
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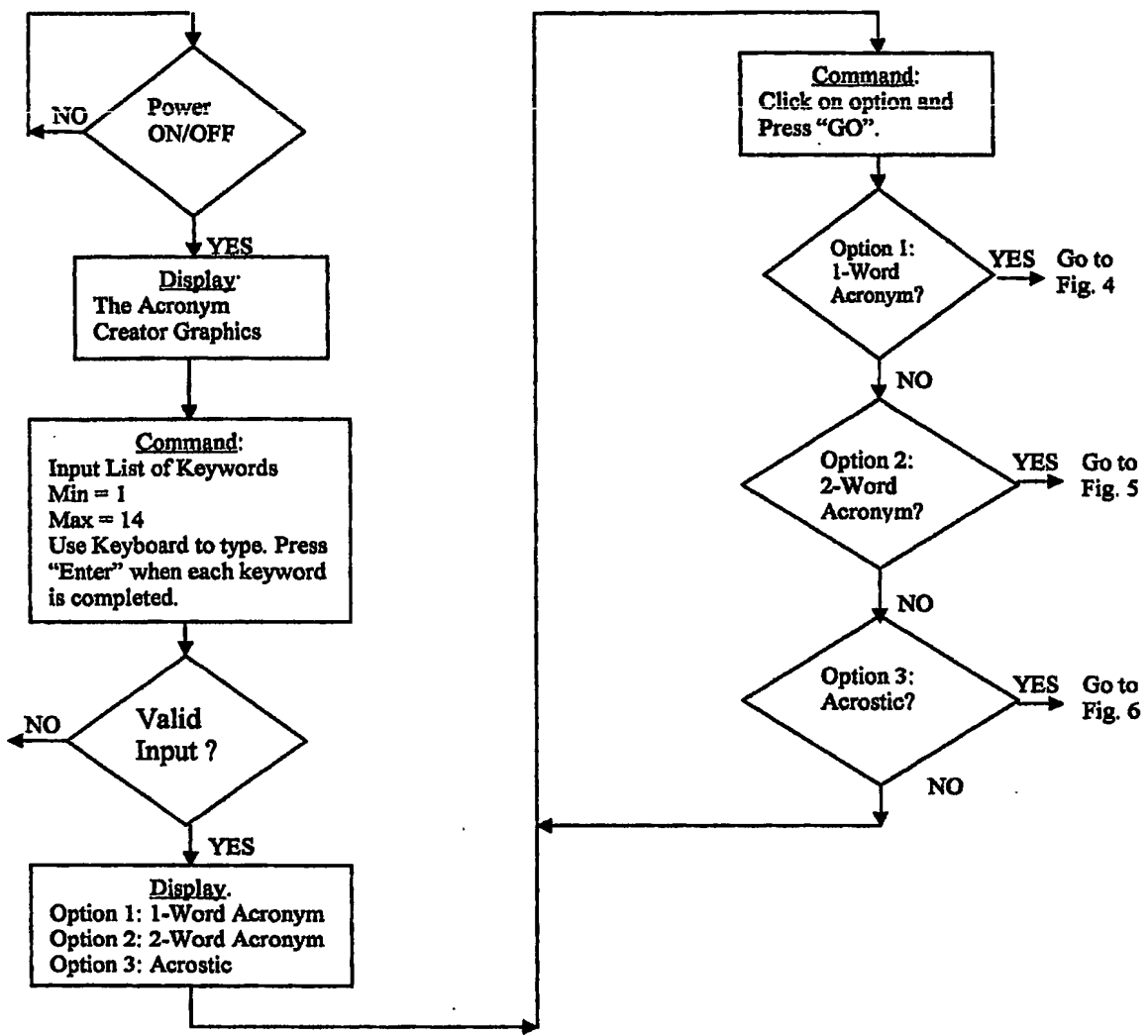
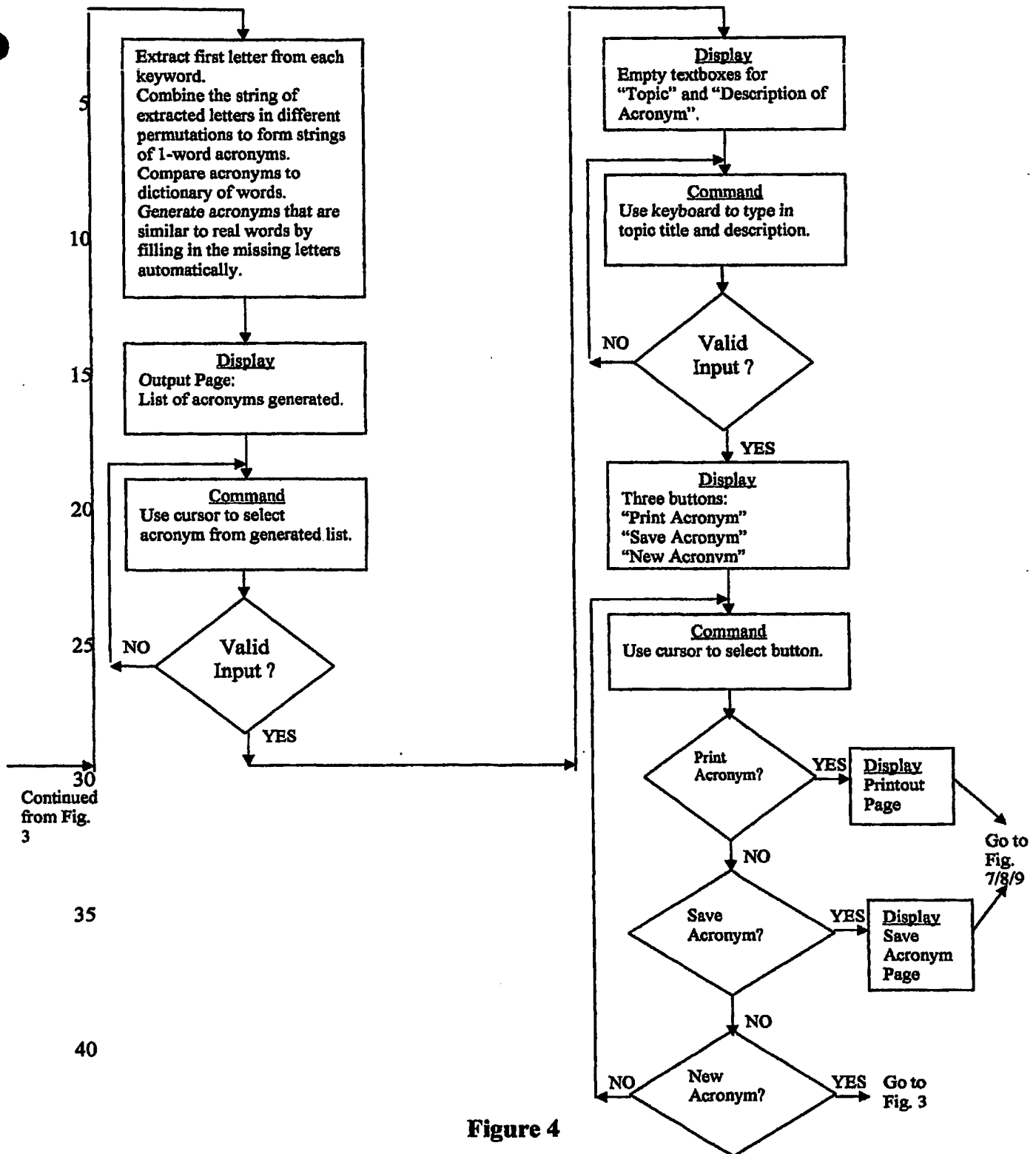
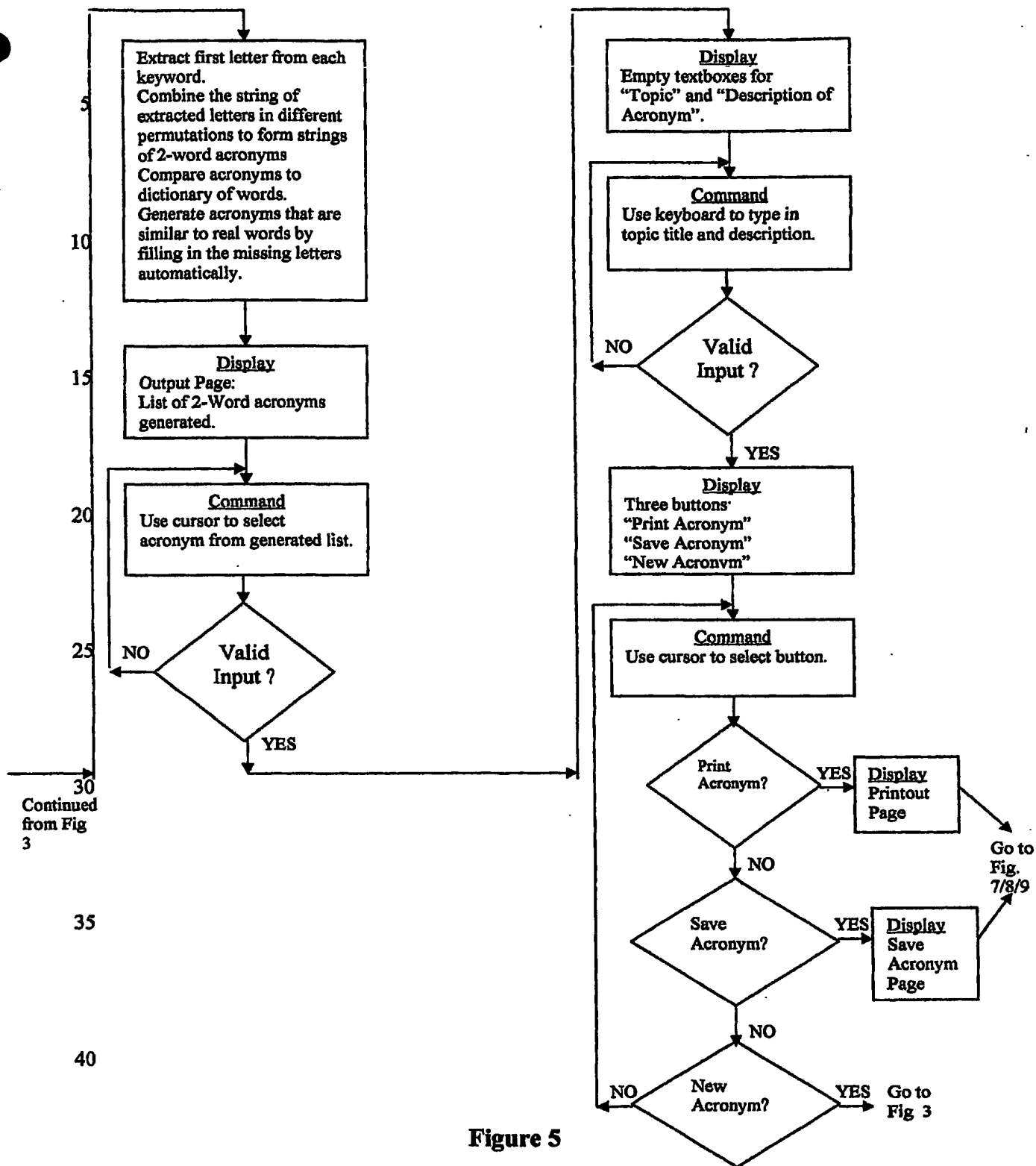
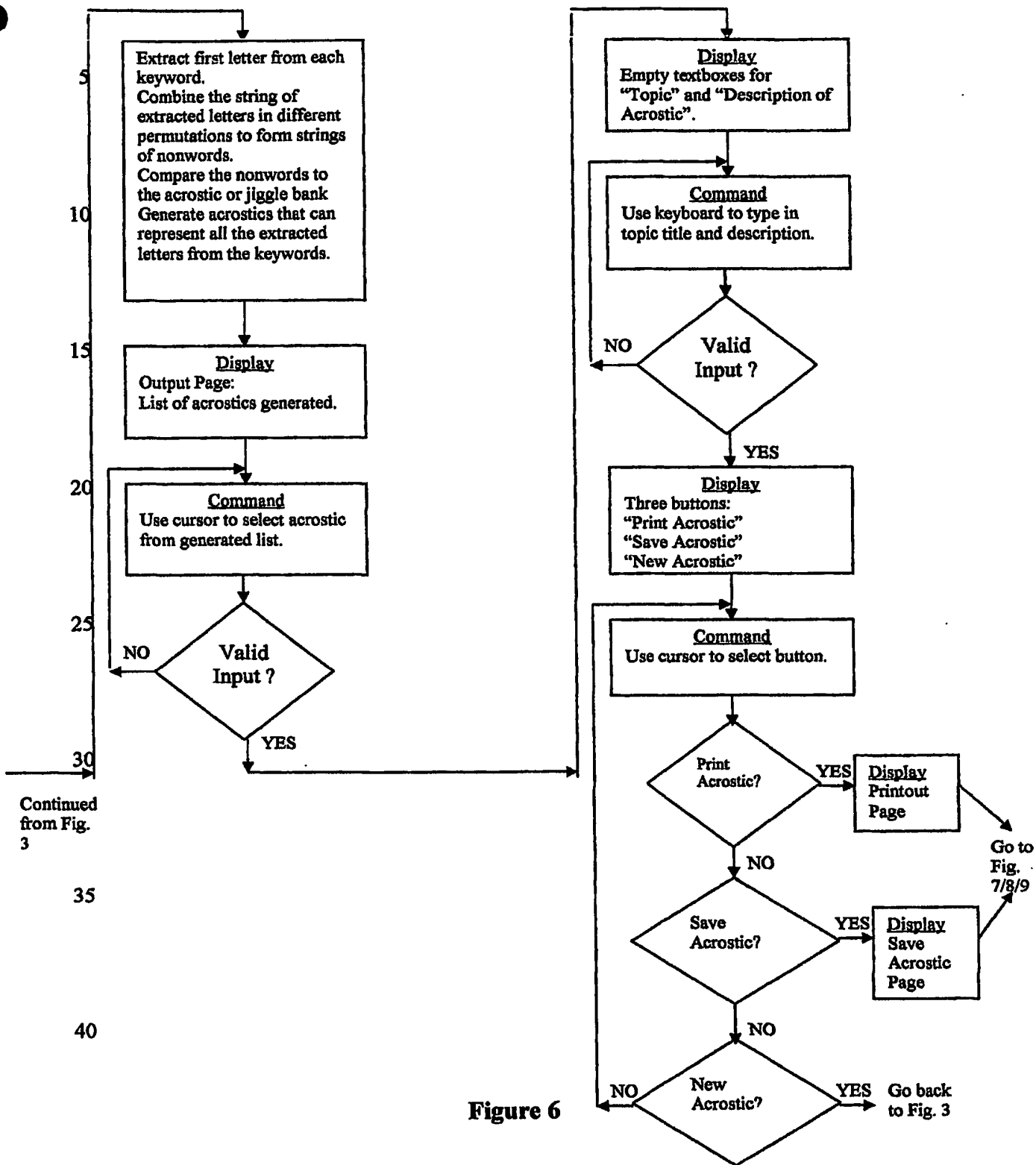


Figure 3







Acronym Pad

Acronym / Acrostic: STEAD

Topic: Leadership Styles

Subject: Management

Source (Book Title): Leadership in Organisations pg: 11

a	b	c
d	e	f
g	h	i
j	k	l
m	n	o
p	q	r
s	t	u
v	w	x
y	z	

Use **Green** – for letters that appear only once
 Use **Orange** – for letters that appear twice
 Use **Red** – for letters that appear thrice

Figure 7

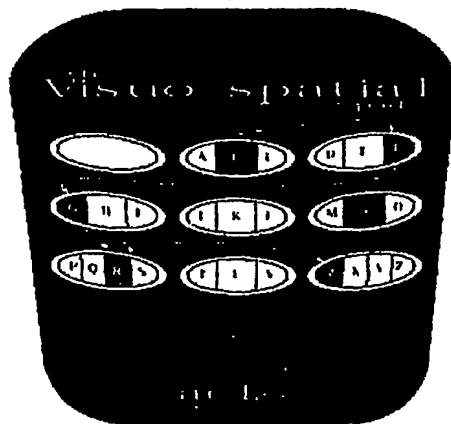


Figure 8

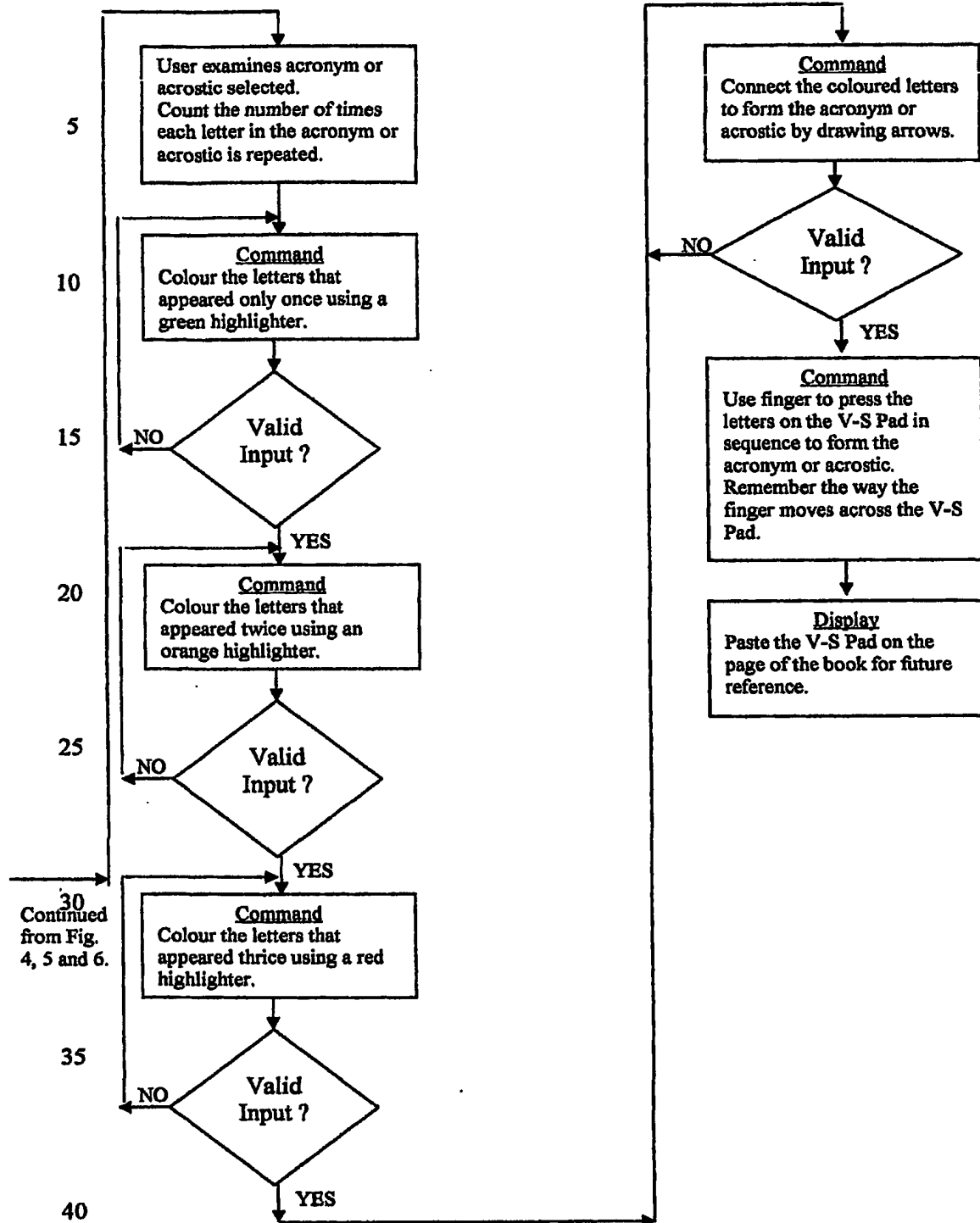


Figure 9

1	London Bridge is Falling Down	LBIFD
2	Old McDonalds Had a Farm	OMHAF
3	Baa Baa Black Sheep Had Some Wool	BBBSHSW
4	Jack and Jill Went Up the Hill To Get Some Water	JAJWUTHTGSW
5	Mary Had A Little Lamb	MHALL
6	Twinkle Twinkle Little Star How I Wonder Who You Are	TTLSHIWWYA
7	If You Are Happy And You Know It	IYAHAYKI
8	Richard Of York Gain Battle in Vain	ROYGBIV
9	Stamford Raffles of England Founded Singapore	SROEFS
10	The Bible Has Sixty-six Books	TBHSSB

Figure 10

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